

# Overview of the Development of the Temporary Sleep Station Hygiene Liner aboard the International Space Station

Ethan A. Reid  
EC6  
Johnson Space Center, TX  
2101 NASA Parkway  
Houston, TX 77058  
Phone: 281-483-0956

## **Abstract**

Since the beginning of manned operations aboard the International Space Station (ISS), the crew had performed hygiene activities within the aisle way (the habitable volume, not including the sleep areas) of the ISS. The Crew used wet towels, re-hydrated body soap, and “no-rinse” shampoo to cleanse themselves amongst the stowage and systems hardware, referred to as “racks”, even without a designated area to dry the wet items. Performing hygiene in this manner became an accepted method; no isolated location was available to the Crew.

After several years of hygiene operations, some of the fabric-covered racks began to grow biological material (generically described as mold) and soon became a Crew health concern. Hygiene has one of the strongest impacts on Crew morale, and mandating changes to the Crew routine would have been met with strong resistance. The answer to the conundrum was to develop a liner to be placed within the Temporary Sleep Station (TeSS), one of the Crew’s sleeping racks. This liner provided the Crew a means to perform hygiene activities within a private, enclosed area that also significantly decreased the potential to grow mold.

This paper will describe the development of the TeSS Hygiene Liner, its impacts on the ISS and Crew, as well as its contribution to hygiene activities used in space today.